

CLAIMS

1. A method of mapping an input image split into input triangles including texels onto an output image also split into corresponding output triangles including pixels, said method

5 comprising the steps of:

- determining an inverse affine transform (BT) for transforming an intermediate rectangle triangle (T0) into an input triangle (T1);
- determining a direct affine transform (FT) for transforming the intermediate rectangle triangle (T0) into an output triangle (T2);
- 10 - applying the inverse affine transform to intermediate points of the intermediate rectangle triangle (T0) so as to determine intermediate intensity values corresponding to said intermediate points on the basis of input intensity values of texels; and
- applying the direct affine transform to the intermediate points so as to determine output intensity values of pixels on the basis of the intermediate intensity values.

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2. A method as claimed in claim 1, wherein the step of applying the inverse affine transform is adapted to transform an intermediate point ($p_0(n)$) into an input transformed point ($p_1(n)$) in the input triangle, and to determine, for said intermediate point, an intermediate intensity value based on a filtering operation of texels surrounding the input
20 transformed point.

3. A method as claimed in claim 2, wherein the filtering operation comprises a bilinear interpolation using four texels surrounding the input transformed point.

25 4. A method as claimed in claim 2, wherein the filtering operation comprises applying sequentially a first mono-dimensional finite impulse response filter in a horizontal direction and a second mono-dimensional finite impulse response filter in a vertical direction.

5. A method as claimed in claim 1, wherein the step of applying the direct affine
30 transform is adapted to transform an intermediate point ($p_0(n)$) into an output transformed point ($p_2(n)$) in the output triangle, and to determine, for said intermediate point, a contribution to output intensity values of pixels surrounding said output transformed point on the basis of the intermediate intensity value.

6. A method as claimed in claim 1, further comprising a step of determining lengths (a,b) of the intermediate rectangle triangle opposite to the hypotenuse which are equal to a power of 2 greater than the length of corresponding edges (e1,e2) in the output triangle.

5 7. A method as claimed in claim 1, further comprising a step of dividing the output triangle into two sub-triangles before the step of applying the direct affine transform.

8. A method as claimed in claim 1, wherein:

- the step of applying the direct affine transform is adapted to determine an output point (p2(n)) and a corresponding output surface (S2(n)) in the output triangle (T2) from an intermediate point (p0(n)) and a corresponding intermediate unitary surface (S0(n)), to determine a pixel (pix(n)) with integer coordinates belonging to the output surface, and to determine an output vector (V2) defined by the output point and the pixel with integer coordinates; and
- 15 - the step of applying the inverse affine transform is adapted to determine an input transformed point (p'1(n)) in the input triangle (T1) from the intermediate point and the output vector, and to filter the input intensity values of texels surrounding said input transformed point so as to derive an output intensity value of the pixel with integer coordinates.

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9. A device for rendering an output image split into corresponding output triangles including pixels on the basis of textured data of an input image split into input triangles including texels, said device comprising:

- means (INIT) for determining an inverse affine transform (BT) for transforming an intermediate rectangle triangle into an input triangle, and for determining a direct affine transform (FT) for transforming an intermediate rectangle triangle into an output triangle;
- 25 - means (TSC,IM,INF) for applying the inverse affine transform to intermediate points of the intermediate rectangle triangle (T0) so as to determine intermediate intensity values corresponding to said predetermined points on the basis of input intensity values of texels; and
- 30 - means (TSC,OM,OUTF) for applying the direct affine transform to the intermediate points so as to determine output intensity values of pixels on the basis of the intermediate intensity values.

10. A portable apparatus comprising a device as claimed in claim 9.
11. A computer program product comprising program instructions for implementing, when said program is executed by a processor, a method as claimed in claim 1.